

### **Claims**

1. A cell targeting vector, containing a DNA sequence encoding a single chain antibody fragment (single chain variable fragment, scFv), characterized in that the single chain antibody fragment has an amino-acid sequence according to any of the figures 1 to 5.
2. The cell targeting vector according to claim 1, characterized in that the vector further contains a DNA sequence encoding a SNV-env leader according to any of the Figures 1 to 5.
3. The cell targeting vector according to claim 1 or 2, characterized in that the vector is T cell specific.
4. The cell targeting vector according to any of the claims 1 to 3, characterized in that the vector is derived from SNV (Spleen Necrosis Virus).
5. The cell targeting vector according to claim 4, characterized in that the vector derived from SNV is derived from pTC53.
6. The cell targeting vector according to any of the claims 1 to 5, containing a therapeutic gene.
7. A pharmaceutical composition containing cell targeting vectors according to any of the claims 1 to 6.
8. The use of the cell targeting vectors according to any of the claims 1 to 6 for gene therapy, vaccination therapy or diagnostics.
9. The use of the cell targeting vectors according to any of the claims 1 to 6 for the therapy of T-cell-associated diseases.
10. The use according to claim 7, wherein the T-cell-associated disease is Acquired Immunodeficiency Syndrome (AIDS) or Severe Combined Immune Deficiency (SCID).